universities, with about 90 percent of the total higher education enrollment, have reported that they expect to spend $3.6 billion on new facilities during the 5-year period 1956–60. This amount would be double the sum spent during the previous 5 years.

Because of increased enrollments in public and nonpublic elementary and secondary schools, about 55,000 more teachers will be needed in 1957–58 than last year. As schools open this fall, there will be a shortage of about 135,000 qualified elementary- and high-school teachers, despite the fact that 81,400 men and women will enter the teaching profession for the first time. The shortage last year was about 120,700.

The continuing teacher shortage will result, as in previous years, in larger classes and the hiring of teachers who do not meet minimum certification standards. About 89,400 such teachers were employed in 1956–57.

The cost of education in public elementary and secondary schools last year, including capital outlay, was $400 per pupil. The total for the country was about $12 billion. A study by the Office of Education shows that 58 percent of the income (excluding receipts from loans and bond issues) for public elementary and secondary education is obtained from local property taxes. State taxes on income, sales, and other business activity provide 38 percent and the Federal Government, 4 percent.

NSTA Aids

Elementary-School Science

The National Science Teachers Association, a department of the National Education Association, is increasing its service to elementary-school teachers in three ways: (i) its present publication, the *Elementary School Science Bulletin,* will be twice as large and be issued eight times a year; (ii) a part-time specialist in elementary science has joined the staff as a consultant and editor; and (iii) NSTA's three conferences for the coming year will emphasize science in the grade schools.

The revised *NSTA Elementary School Science Bulletin* will be off the press in October as a two-color, eight-page publication. It will appear monthly through May, with subscriptions priced at $1 annually per individual and 50 cents each for school groups of five or more persons.

Dorothy Alfke has joined NSTA headquarters staff on a part-time basis and will serve as a field consultant and as coeditor of the new bulletin with Robert H. Carleton, executive secretary. Miss Alfke is a professor at the College of Education at Pennsylvania State University; she received her doctorate from Cornell University in elementary science and nature education.

Science in the elementary grades will come in for major discussion at two NSTA regional meetings, scheduled in Hartford, Conn., 18–19 Oct., and in Indianapolis, Ind., 27–30 Dec., during the AAAS meeting. The national convention in Denver, Colo., 26–29 Mar., will be preceded by a 1-day conference for elementary supervisors.

Italian Nuclear Power Study

The Government of Italy and the World Bank have announced that they have agreed to cooperate in sponsoring a study that will lead to the construction of a large nuclear power station in southern Italy. Previously, Italy had announced that a nuclear power station would be built in the south by the Societa Elettronucleare Nazionale. The Societa is a company whose principal shareholders consist of all the major electric power companies in southern Italy, together with a number of government-controlled metallurgical and engineering corporations.

The study will be known as Project E.N.S.I. (Energia Nucleare Sud Italia), and will include the following steps: (i) the selection of a site for a nuclear power station; (ii) the preparation of invitations to qualified manufacturers, on an international basis, to offer proposals for a nuclear plant of approximately 150,000 kilowatts electric capacity at the proposed site; and (iii) a review of the proposals submitted and the preparation of an evaluation of them, particularly with regard to comparative cost and performance.

The executive responsibility for Italian participation in the project has been given to the Comitato Nazionale per le Ricerche Nucleari, the official institution responsible for nuclear research and development in Italy. The general secretary of the Comitato, Felice Ippolito, and Corbin Allardice, adviser on atomic energy to the World Bank, will together make up the steering committee that will be responsible for over-all direction of the project. The U.K. Atomic Energy Authority and the U.S. Atomic Energy Commission have agreed to provide nuclear engineering consultation.

The World Bank will set up an international panel of specialists to provide general guidance and also to review the proposals and the reports on them provided by the U.K. Authority, the A.E.C., and the project staff. The panel will have a Canadian as chairman and will also include one French representative, one Italian, two U.K. nationals, and two Americans. The panel will transmit its reports to Societa Elettronucleare Nazionale, which will select the most suitable proposal for the construction of the power station.

NSF Survey of Science Faculty

A survey of faculty engaged in scientific research activities in United States academic institutions that was released recently by the National Science Foundation indicates that 70,000 scientists and engineers were employed in 1953–54 by colleges and universities; about half of these people were performing research on a full- or part-time basis. The survey covered 1120 institutions capable of performing research in the natural and social sciences. Other academic institutions in the country are primarily teachers' colleges or are oriented toward education in the liberal arts.

The NSF figures are based on data returned by 987 responding institutions. These institutions reported 62,000 faculty members in the natural and social sciences, and an estimate of 8000 was made for nonrespondents. Of the respondents, 180 were large institutions—that is, primarily those having graduate schools in the scientific professions. These accounted for 46,500 of the total scientific faculty and for 95 percent of the total research time reported.

The reported faculty members included both full- and part-time scientists and engineers engaged in any or all of the usual duties of a faculty member—teaching, research, and community service. Translating part time and full time into full-time equivalents, about 30 percent of the total time was devoted to research activities.

The foundation's report presents the number of faculty in these institutions and the percentage engaged in research in six different types of organizations within the universities: arts and sciences; engineering; public health, medicine, and dentistry; agriculture; research organizations; and other professional schools. About 75 percent of the total faculty employed were in the arts and sciences, engineering, and medical schools.

Scientific fields being investigated by these faculty members are also shown in the report. Approximately one-third of those performing research were in the physical sciences, such as engineering, chemistry, physics, and mathematics; one-third, in the life sciences (biological and clinical); and the other one-third pursue investigations in the agricultural and social sciences.

The supporting research personnel reported by the large (180) institutions